

RESEARCH QUARTERLY UPDATE

Office of Research and Development

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An overview of key accomplishments and initiatives in VA research

SUMMER 2018 • THIS ISSUE: THE AGING VETERAN

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VA



U.S. Department of Veterans Affairs

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Rachel B. Ramoni, D.M.D., Sc.D.
Chief Research and Development Officer

Serving older Veterans, as they serve us

Stories about our Veterans resonate. It is the rare individual who won't smile when members of the local Veterans organization press their military uniforms, shine their boots, and march in their hometown 4th of July parade.

Perhaps you have met local Veterans who are part of a volunteer brigade during a natural disaster handing out water bottles or food, or you might see them at the county farm festival, judging a 4-H contest.

The thread that ties these events together is service. Years and decades after our brave Veterans have supported us through military service, many are still serving in their local communities and at the national level.

As VA's chief research and development officer, I know that service also extends to participating in medical research. If it were not for Veterans' participation in clinical trials and cutting-edge research, many medical breakthroughs might never have occurred.

In this issue of *VA Research Quarterly Update*, we examine research that is meant to improve the lives of older Veterans.

One exciting study is looking at different ways to deliver a relaxation-based therapy for anxiety to older adults. According to VA geropsychologist Dr. Christine Gould, adults often experience anxiety in later life. That is why Dr. Gould has developed a treatment for anxiety that is based on deep breathing and muscle relaxation. The delivery method, DVDs, was designed to ensure that Veterans have ready access to this therapy. Once a Veteran has learned the technique, he or she can practice discreetly anytime their anxiety increases—in the grocery store, at the ball field, or a neighborhood BBQ.

Another readily accessible therapy, also being tested out at VA Palo Alto Health Care System, takes place in the aquatic center. Dr. Jennifer Kaci Fairchild, a psychologist and VA researcher, is conducting a study that will examine the effectiveness of water-based exercise on improving memory loss in older Veterans. The study—Water-based Activities to Enhance Recall

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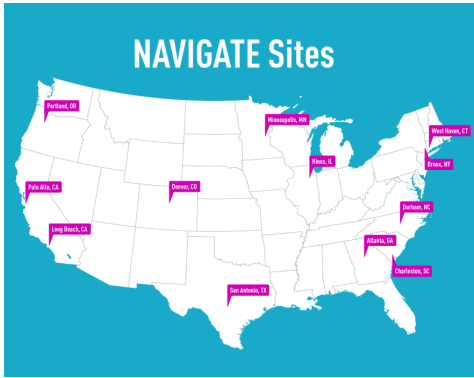
in Veterans, or WATER-Vet—will consist of a series of aquatic exercises and memory training. In the beginning, the Veterans will have access to a personal trainer who will take them through two months of group classes. Thereafter, they will continue to work out on their own.

Weight-bearing physical exercise has been shown to help patients with dementia, but the benefit of non-weight bearing exercise like water aerobics has not yet been proven. That's why Dr. Fairchild's study is so important—water-based exercise is enjoyable and broadly accessible, even for disabled Veterans. If the therapy does prove effective, it has the potential to improve the lives of many patients with memory loss.

We also write about the important work that Dr. Matthew Bair is doing at the Richard L. Roudebush VA Medical Center in Indianapolis, Indiana. Dr. Bair is a well-known pain researcher who is studying the use of non-drug therapies to treat chronic pain. He says combination therapy that makes use of multiple forms of treatment, including drug and non-drug therapies, is often more effective than just using a single therapy. His research has studied the use of non-drug therapies like cognitive behavioral therapy or massage therapy in concert with drug therapies like ibuprofen or oxycodone.

These studies illustrate just three of the ways in which VA researchers are working to improve the lives of older Veterans. In this issue of *VARQU*, we also write about many more research efforts that are underway in VA to better understand the aging process and help Veterans meet the challenges that come with it. I hope that the information provided here will prove useful to you and that you will share it with friends and family. Research is an important part of the value that VA brings to the table for Veterans and Americans at large.

Rachel B. Ramoni, D.M.D., Sc.D.
Chief Research and Development Officer



VA partnership with NCI to boost Veteran access to clinical trials

Veterans with cancer who receive care from VA will now have more access to the latest treatment options, thanks to a partnership between VA and the National Cancer Institute (NCI).

VA is partnering with the National Cancer Institute to broaden access to clinical trials for Veterans. The program is launching at 12 VA facilities throughout the U.S. (Photo @National Cancer Institute)

The NCI and VA Interagency Group to Accelerate Trials Enrollment, or NAVIGATE, is launching at 12 VA sites throughout the country. The

collaboration will make it easier for Veterans to join clinical trials sponsored by NCI's National Clinical Trials Network and the NCI Community Oncology Research Program.

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NAVIGATE will build infrastructure at the VA sites to enable more Veterans to take part in cutting-edge clinical trials sponsored by NCI. Such trials typically test cutting-edge experimental treatments such as precision-medicine therapies based on patients' genetic profiles, or immunotherapies that harness patients' own immune systems to bring about cures.

The NAVIGATE network will also establish best practices and share insights to help other VAs nationwide enroll more Veterans in cancer clinical trials. Special attention is being given to minority patients, who often have poorer access to new treatments and are not as well-represented in clinical trials in the U.S.

While VA has a robust research program—including clinical trials on cancer and other diseases—at more than 100 sites nationwide, VA facilities often face challenges initiating and completing trials. Local VA research staff, for example, may lack adequate support to handle certain regulatory and administrative tasks involved in these studies. NAVIGATE will help remove those barriers.

“NAVIGATE is an opportunity for VA and NCI to partner at the national level to make clinical trials more accessible to Veterans,” said Dr. James H. Doroshow, deputy director for clinical and translational research at the

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NCI. “This agreement will not only provide Veterans greater access to NCI clinical trials, it will ... also work to help Veterans overcome barriers they’ve faced trying to access clinical trials as part of their cancer care.”

VA health systems that will participate in NAVIGATE are located at Atlanta; the Bronx, New York; Charleston, South Carolina; Denver; Durham, North Carolina; Hines, Illinois; Long Beach, California; Minneapolis; Palo Alto, California; Portland, Oregon; San Antonio; West Haven, Connecticut; and Boston. Boston will also serve as a coordinating center for the effort.



Researchers at a VA state-of-the-art conference investigated non-opioid therapies for chronic pain. (Photo @iStock/People Images)

JGIM Supplement features VA research on alternate approaches to pain

Thirteen articles based on outcomes and policy recommendations from VA’s Health Service Research and Development state-of-the-art conference on “Non-pharmacologic Approaches to Chronic Musculoskeletal Pain Management” were published in a [special supplement](#) of the *Journal of General Internal Medicine*.

The conference brought together experts from VA, the Department of Defense, and the National Institutes of Health to discuss the existing knowledge base on non-opioid therapies for chronic pain.

The thrust of the SOTA was to review the effects of complementary and integrative health (CIH) on pain and opioid use; discuss the different approaches to chronic pain; and share ideas on the larger topic of non-opioid therapies.

“Evidence clearly shows that no single therapy is the best approach for a majority of patients with chronic musculoskeletal pain,” Drs. Robert Kerns, Erin Krebs, and David Atkins wrote in the introduction. “Like analgesic medication, non-pharmacologic therapies generate meaningful clinical improvement in only a subset of patients.”

Because there is no one best therapy for chronic pain, they recommend that health systems and payers offer multiple options for pain management to patients. CIH therapies like yoga, massage, or mindfulness-based stress

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reduction are equally as important as structured exercise or cognitive behavioral therapy, they point out.

It is also important for clinicians to use a multimodal, stepped model of care that allows individual Veterans to try different kinds of therapy, if the first one doesn't work. The researchers suggest that type of multimodal care can be best implemented by primary care physicians who don't just treat patients for pain, but also for other contributing conditions like diabetes.

Because VA is an integrated health system that provides comprehensive care, wrote the authors, it is well-suited to offer the type of multimodal care that is best for chronic pain patients.



Internal medicine physician and VA researcher Dr. Matthew Bair is working to improve pain management in the primary care setting. *(Photo by Ricardo Ramirez)*

VA researcher is strong advocate for combining therapies for chronic pain

Dr. Matthew Bair is a general internal medicine physician and VA health services researcher. He is a core investigator with the HSR&D Center for Health Information and Communication ([CHIC](#)) in Indianapolis. He is also an associate professor of medicine at Indiana University School of Medicine. His primary research interest is pain

management in the primary care setting.

Over the last 15 years Bair has been part of a team of pain researchers that have worked to improve pain management in the primary care setting, particularly looking more at combining pharmacologic (the use of drugs) and non-pharmacologic treatment for Veterans.

Considered a leading expert in pain management, Bair recently gave a presentation on Capitol Hill as part of a conference sponsored by the National Association of Veterans' Research and Education Foundations (NAVREF). He and two other VA pain researchers, Dr. Erin Krebs and Dr. Sulayman Dib-Hajj, were invited to speak about their pain management research.

VARQU spoke with Bair about his presentation and his work to help Veterans better manage their chronic pain.

Welcome Dr. Bair. How prevalent is chronic pain in the Veteran population?

I think estimates for the prevalence of chronic pain in Veterans range from 50 percent in men to even higher in women Veterans. Dr. Robert Kerns and his team at West Haven, Connecticut, said that women Veterans have prevalence as high as 70 to 75 percent. At least one in two, or three out of four Veterans have chronic pain. That is higher than in the general population—about one in three people in the general population have chronic pain.

What are some of the unintended consequences of using opioid therapy?

Like any other pain treatment, the primary goals of opioid therapy are to reduce pain intensity and improve function. So if you take opioids away,

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there is the potential that you could actually increase pain intensity or worsen function.

I think there are also some associated issues that could potentially worsen quality of life. We know that patients with chronic pain and particularly patients on opioid therapy can be subject to stigmatization. I worry that if opioids are restricted significantly, that stigmatization could be heightened and, potentially, racial and ethnic disparities could widen. There is some data that suggests that opiates are less likely to be used in some clinical settings among African Americans relative to whites.

Besides opioid therapy, what evidence-based treatments are available to treat chronic pain?

There are multiple evidence-based treatments to treat chronic pain—opioids are just one, in terms of pharmacologic treatment. For example, non-steroidal anti-inflammatory drugs (like ibuprofen) are an evidence-based treatment for many chronic pain conditions, particularly osteoarthritis.

There are also many non-drug treatments that are evidence-based for the treatment of chronic pain. The strongest evidence is for cognitive behavioral therapy (CBT)—which is psychological therapy.

CBT provides patients with self-management strategies so they can better cope with their pain. It uses goal setting, which is a helpful strategy to help patients improve their quality of life and function. Some patients have what we call maladaptive thoughts related to their chronic pain; in those cases, CBT tries to substitute those negative thoughts with more positive, more helpful, more adaptive thoughts to better cope with their pain.

Physical therapy interventions—particularly a tailored exercise program—are also evidence-based. We have the whole suite of cognitive and integrative health treatments that are growing not only in popularity, but in evidence, from acupuncture treatment to massage therapy to spinal manipulation therapy, chiropractic therapy, yoga-based therapies, or tai chi.

So that's the good news. There are a lot of options to treat chronic pain. The downside is that each therapy individually has modest benefits. We don't have a treatment that is knocking it out of the park in terms of effectiveness. So the challenge is for an individual patient to find the right treatment or treatments. Usually what we need to do to get a stronger treatment effect

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is to combine treatments. And that's where I'm particularly interested: trying to find the right combination of pharmacologic treatment and non-pharmacologic treatment that improve treatment effects.

Research shows there is a relationship between pain and depression. Can you explain why?

We know that there is strong relationship between chronic pain and depression. There's an overlap between 30 and 50 percent—these go hand in hand, 30 to 50 percent of the time. So we know that there's a strong, reciprocal relationship—meaning that, if someone has a chronic pain condition they are more likely to develop depression. Because that would make sense, if you had pain and you are not able to do certain activities, recreational or sports, you might become depressed and socially isolated, which can make you more depressed. So we know that relationship is fairly strong—that chronic pain leads to depression.

The other relationship is that depression can lead to pain in the future. It's interesting that depression has been found to lower pain thresholds. Pain and depression share certain neurochemicals or neurotransmitters, and they share neuroanatomical pathways that are important in the regulation of pain and depression. So when I talk to my patients, I really talk to them about that cycle: that depression can lead to pain and pain can lead to depression. I feel that the most effective treatment is one where we address both at the same time.

Men are often characterized as less willing to talk about experiencing pain and depression than women. Do you find this to be true in your practice?

Absolutely, I think there are gender differences in how depression manifests, where women may be more likely to report depressive symptoms or physical symptoms that are a manifestation of depression. For men, their depression may manifest differently. They present more with anger and irritability, rather than a sad mood and anhedonia, or loss of interest.

There are gender differences in how depression might present and manifest, but there's also differences in how men and women may report symptoms, or the likelihood of reporting symptoms. I think another issue in the military and VA is the military culture. There is a saying in the military, particularly in the Marines, that says pain is weakness leaving the body. It

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is a tough image that, I think, perpetuates not reporting pain, not reporting depression. I think that inhibits those conditions from being recognized by clinicians, at times. And so, if they are not recognized, they are not treated.

Can you tell us about the work you did on SCAMP—a clinical trial that examined antidepressant therapy and pain self-management?

Stepped Care for Affective Disorders and Musculoskeletal Pain (SCAMP) was a [clinical trial](#) that was focused on primary care patients that had this comorbidity—meaning the coexistence of chronic pain and depression. So they had low back pain and depression. The idea of the SCAMP intervention was to try and address both conditions—to improve pain and depression outcomes. The intervention involved three months of treatment with antidepressant medications, according to an algorithm—a stepwise treatment sequencing—which would address depression symptoms.

It also included a pain self-management program that was largely based on cognitive behavioral therapy principles. So it helped in terms of educating Veterans about their pain condition, goal setting, problem solving, and strategies like deep-breathing techniques and relaxation strategies to better equip them to cope with their pain.

There were 250 patients who were involved in this study. We showed pretty significant improvements in depression symptoms and response rates in depression. The improvements in pain were more modest. They were important in terms of improving pain severity and function, but not as marked improvement as depression treatment.

Where would you like to see your research go from here?

I think we need to improve the evidence base for non-pharmacologic treatments, particularly in the complementary and integrative health area. We have an ongoing study that is looking at comparing yoga therapy versus a physical therapist-guided exercise program for Veterans with fibromyalgia. We are finishing up that trial.

We also have an ongoing clinical trial that's looking at Veterans with chronic neck pain, comparing two different types of massage interventions. One massage intervention is delivered by licensed massage therapists—what we view as the gold standard. We are comparing that to caregiver-delivered massage. Caregivers—spouses, children, or adult caregivers—will be trained

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in Swedish massage techniques so that they may apply them to Veterans with chronic neck pain.

I'm also interested in the overlap between chronic pain and PTSD and chronic pain and insomnia. Again, these are very common comorbidities—they go hand in hand. We see them a lot in patients with chronic pain, whether its anxiety symptoms, such as PTSD, or poor sleep, which can worsen their treatment response and worsen pain treatment outcomes. So we need to address those comorbidities.

Impact of research on physician satisfaction



46%
of VA inpatient doctors surveyed
were involved in **research**

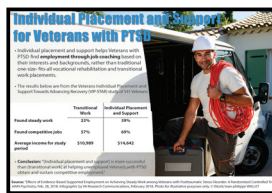
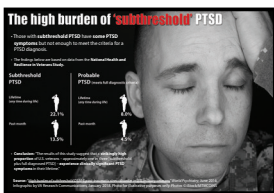


“Physicians’ ratings on perceived quality of care and adequacy of physician staffing were the strongest predictors of overall job satisfaction. ... Among the job tasks that physicians spent their time on, time spent on research was associated with increased job satisfaction and decreased intent to leave.”

Conclusion: “Expanding opportunities for physician involvement with research may lead to more positive work experiences, which could potentially reduce turnover and improve system performance.”

Based on 373 survey responses from inpatient physicians at 36 VA medical centers. “Factors associated with internal medicine physician job attitudes in the Veterans Health Administration.” *BMC Health Services Research*, April 5, 2018. Infographic by VA Research Communications, April 2018. Photo for illustrative purposes only. © iStock/Tinpixels

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www.research.va.gov/pubs/infographs





Dr. Christine Gould, a psychologist and VA researcher, is investigating the effectiveness of a new intervention to help older Veterans who experience anxiety. (Photo by Adan Pulido)

Relaxation training can help older Veterans who suffer from anxiety

Dr. Christine Gould is a clinical geropsychologist—a psychologist who works with older adults—and a researcher with the Geriatric Research Education and Clinical Center at the VA Palo Alto Health Care System. She is also an affiliated instructor with Stanford University in the department of psychiatry and behavioral sciences.

Her research is focused on understanding and developing new treatments for anxiety disorders that occur in older adults—those

who are 60 years or older. She is currently investigating the effectiveness of a new delivery method for an intervention to help older Veterans who are experiencing anxiety in later life.

VARQU spoke with Gould about her Career Development Award to help develop a video-based relaxation therapy for older Veterans.

How common is anxiety in later life for Veterans and older people in general?

Anxiety is actually almost twice as common as depression in older adults. We don't have great data on the number of older Veterans with anxiety, but we did find that 1 in 10 older Veterans has elevated anxiety symptoms using the Health and Retirement Study data.

I believe that one specific anxiety disorder—one of the more problematic ones called generalized anxiety disorder—affects about 12 percent of Veterans. When older Veterans have other conditions like medical problems and PTSD in particular, anxiety disorders other than PTSD often co-occur with both medical conditions and PTSD.

What do you aim to accomplish through your Career Development Award?

My [award](#) is focused on improving functioning in older Veterans with anxiety disorders. There are two parts to it. One part is to develop and test the relaxation intervention. The other part is to look at ways that older

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Spotlight on Career Development Awardees

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Veterans are interested in receiving psychological treatment over a distance.

We know many older Veterans live in more rural areas or might live at further distances from VA clinics, in addition to having mobility difficulties or transportation difficulties which make it hard to get into clinics. So what I wanted to do was to find and identify some ways of receiving treatment that older Veterans are interested in, for further dissemination.

How are you providing the relaxation therapy?

The relaxation videos—we are calling it the BREATHE program—are delivered through DVD videos. Eventually we might consider using internet delivery or mobile app delivery as well. But right now, people get a set of DVDs—it's a four-week program—and each week they are asked to watch a video lesson, which explains what anxiety is, teaches diaphragmatic or deep breathing, and teaches a specific type of relaxation called progressive muscle relaxation.

People will watch the lesson once and then they have a practice video which they can use to guide their relaxation practice every day. It's a four-week treatment, and each week they have a different lesson that builds on the previous week.

There is a coach as well, so the patients will receive a telephone call from a provider who will coach them through the treatment, help them adhere to it, and troubleshoot any issues that come up.

Could you explain more in-depth what the BREATHE technique involves?

The BREATHE program is pulling together some different techniques that research has shown work well for anxiety. Diaphragmatic breathing or deep breathing is a skill that is often taught to individuals with anxiety. So we teach that along with the modifications for older Veterans who might have different medical conditions such as lung programs, like COPD.

Then the relaxation technique is progressive muscle relaxation. It's been around for many, many years. It has been well-studied since the 70s. What this technique does is you go through your body and you are guided in tensing and then releasing each muscle group. The thought is first that it helps people really understand and identify where they are holding tension in their body, which often comes up when people are worried or feeling anxious. And also it helps promote relaxation by tensing and releasing different muscle

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groups—we say it gives patients a running start to relaxation, rather than trying to relax that muscle group from the beginning.

It also gives people who worry a lot a strategy to release that tension and focus on something else, and really focus on taking care of themselves.

How well was the BREATHE program received by Veterans?

We obtained feedback on the videos from 20 older Veterans. It was well-received—they gave us a lot of great feedback about how we could clarify the videos. Right now we are testing those revised videos with 10 older Veterans. Some of the comments—which are still being collected—were that individuals had learned this technique previously in a group therapy or another setting, but by being in a structured program where they have the videos, a schedule when they are supposed to practice, and a coach following up with them by phone, it really has helped them integrate this technique into their daily lives. And really stick with it, as opposed to just learning it once in a group therapy type-setting.

Does the practice of mindfulness have any similarity to guided relaxation therapy?

Yes, that's a great question. Some of the principles are the same, in that you are really paying attention to your body and noticing the differences between tension and relaxation. One of the main differences is that with progressive muscle relaxation you are manipulating your body by tensing the muscles—where in mindfulness, you would be noticing the sensations in the present moment.

I conceptualize the progressive muscle relaxation as a nice step prior to mindfulness—especially for individuals who are anxious. Mindfulness is a great tool, but it is hard to do if you are not ready to sit there with your thoughts. It is hard to accept anxious thoughts in the moment, to engage in that kind of nonjudgmental observation of them.

Mindfulness requires you to be very still and screen out everything around you—is that correct?

Yes, and just noticing the thoughts that are there. Let's say you have a worry about a medical condition that you have, and you are worried about maybe your blood pressure. With mindfulness you would just be noticing your worries, trying not to judge yourself for being worried, and also, trying not to control or get rid of those thoughts.

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Progressive muscle relaxation, on the other hand, is a little bit more active, and could be a good tool for people who are more anxious and need something to help them feel like they get a little bit of control over their thoughts by using this more active intervention. But eventually, mindfulness could be a great next, more advanced, step.

You mentioned that this type of relaxation therapy would be appropriate for Veterans with PTSD. Are there other conditions where this therapy would be helpful?

Definitely, for people who might have pain, you can actually make modifications to the relaxation therapy. If you are having acute pain, you can just imagine the tensing, and that was found in research to actually work just as well as doing the tensing itself. And in the findings that I presented at the Association for Behavioral and Cognitive Therapy conference, in my pilot study, we found that BREATHE intervention reduced anxiety symptoms, depressive symptoms, and also somatic symptoms.

I should say one thing. I spend a lot of time speaking about the relaxation, but the one thing that makes the BREATHE program a bit different is emphasizing taking the relaxation techniques that you have learned and then applying them in your daily life. One of the things that the coaches are aiming to do is to help the Veterans make it a habit—and by making it a habit, I mean really using those relaxation techniques to get back in their daily lives. With chronic pain, movement is actually important, but people avoid the movement because it is very uncomfortable and anxiety provoking. So a tool like relaxation can help people bridge that gap and continue to maintain their functioning as they age.

Once you complete the study, where would you like to take further research?

I think next steps would be thinking about disseminating this intervention. We've created a provider manual to help to disseminate the program more broadly within VA, when we are ready. I can see it being used as a tool for providers in home-based primary care. Psychologists there might have Veterans who live a long distance from their home VA facility use the BREATHE program as a guided self-management technique.

Another avenue of future research is technology. Technology research with older adults is an exciting field because there are many different factors to

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Spotlight on Career Development Awardees

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take into account. One of the factors is advancing technologies. It is harder to find computers with DVD drives/players these days—not as many people have DVDs players.

One of the things that I've found in my study on older Veterans' preferences for technology is that many older Veterans own a smartphone and are interested in using mobile apps. In my study with older Veterans, ages 60 to over 90 years old, 74 percent of those owned a DVD player and 70 percent owned a smart phone. So that is a potential future way of disseminating the treatment.



Researchers at the VA Palo Alto Health Care System are studying a water-based exercise program to help Veterans with mild memory loss. (Photo for illustrative purposes only. @iStock/Fat Camera)

Veterans aim to keep minds sharp by taking a dip in the pool

Jennifer Kaci Fairchild Ph.D., Funding period: January 2016–December 2018

VA research psychologist Dr. Jennifer Fairchild is conducting a study that will examine the effects of water-based physical exercise and cognitive training for Veterans who have mild cognitive impairment (MCI) with memory loss. The [study](#)—Water-based Activities to Enhance Recall in Veterans, or WATER-Vet—is being conducted at the VA

Palo Alto Health Care System in California.

The two-year clinical trial consists of two phases. Fifty Veterans ages 50 to 90 with amnesic MCI will participate in a six-month cardiovascular and strength-training program that consists of land-based stretching and a water-based exercise program. For the first two months, Veterans will attend group classes at the aquatic therapy center, three times a week. Thereafter, they will participate in a self-paced exercise program.

Following completion of the exercise portion of the trial, Veterans will take part in a cognitive training program that consists of mnemonic drills. During this period, they will complete several neuropsychological tasks that relate to attention, executive functioning, and memory.

Veterans with amnesic MCI are at greater risk of developing dementia as they age. Because current medical treatments are of limited value, researchers are keen on developing non-pharmacologic therapies to treat cognitive impairment. Physical therapy programs that include weight-bearing exercises have proven to improve thinking in patients with dementia. However, it is yet to be demonstrated that non-weight bearing activities like water therapy would provide the same benefit.

While objective data from the study are still pending, Fairchild says the Veterans who are taking part have so far provided lots of positive feedback. “Participants say that when they get in the water the pain just goes away,” said Fairchild in an interview with *Palo Alto Online*. “We have guys with walkers jumping into the pool next to guys who run half-marathons, and they’re able to exercise together.”

**To find out more about Dr. Fairchild’s study, read [“Studies at Palo Alto VA investigate the exercise-brain connection.”](#)*

Montessori-based activities could benefit Veterans in community living centers

Michelle Marie Hilgeman, Ph.D.; Funding period: March 2017–February 2020



VA is studying whether Montessori-based activities such as gardening can help Veterans who live in VA community living centers. (Photo for illustrative purposes only. @iStock/Rom Rodinka)

VA researcher Dr. Michelle Marie Hilgeman is conducting a [study](#) that will examine the effectiveness of a Montessori-based therapy for Veterans who live in VA community living centers (CLCs).

Because a significant majority of Veterans who live in CLCs have some form of dementia and/or mental illness (69 percent), there is a need for programs that can address negative behavioral issues like shouting or combativeness.

Montessori-based Activity Programming (MAP) is a nursing-home intervention that uses structured activities to help residents become more socially and cognitively engaged. The activities must be meaningful to Veterans and often are modeled after activities that are familiar, like gardening or wood-working.

During phase I of the program, investigators at the Tuscaloosa VA Medical Center in Alabama developed and tested the MAP program materials and training manual at four CLC sites. During phase II, they will further refine the training materials and roll out implementation at six CLC sites. The MAP program traditionally requires a lengthy training period for nursing-home staff. Part of this study involves comparing the results of an in-person training program to one that is delivered remotely via conference calls.

At the conclusion of phase I, Veterans who went through the MAP showed a decrease in agitation and a reduction in the need for psychotropic medications. Veterans have also demonstrated improvement in orientation to place and are participating in more center activities.

The Montessori Method was originally developed for use in children who had developmental disorders in the early 1900s by Dr. Maria Montessori. It was later modified for use in children with normal intelligence. It is an early childhood education program that stresses independence, freedom of choice, and self-determination. It is now being used to help address behavioral issues in people who have dementia.

Using telehealth to help Veterans with dementia

Cory K. Chen, Ph.D.; Funding period: May 2017–December 2018



VA researchers are developing a video-based intervention designed to improve the interpersonal skills of family members caring for Veterans with dementia. (Photo @iStock/Andrey Popov)

As the number of Veterans with dementia increase, there will be greater demand on family caregivers. Caregiving, while potentially meaningful, has been associated with greater rates of depression, anxiety, and physical stress. A team of researchers at the VA NY Harbor Healthcare System will develop a telehealth [intervention](#) to improve conflict-management skills for caregivers of Veterans.

Dr. Cory Chen and colleagues will develop and test a video-based intervention that is designed to diagnose and improve interpersonal skills of family members caring for Veterans with dementia. They hope to lessen caregiver burn-out and reduce the number of Veterans who are ultimately institutionalized because of behavioral issues that are too challenging to manage at home.

In phase I, researchers will create a video-based observational coding manual (OCM) that will be used to evaluate the interpersonal skills of caregivers for Veterans with dementia. The manual will be developed with the aid of an advisory panel composed of individuals with expertise in family psychotherapy and caregiving. It will be based on previous manuals that were developed to assess interaction patterns in couples and families of people with dementia.

The team will then film 15 paired interactions between patients and caregivers, and together with five psychology trainees, will code interactions in each video using the OCM. Through this activity, they will assess the videos for validity and reliability, and also will judge the usefulness of the manual by interviewing caregivers, patients, and clinicians.

To accompany the completed OCM, the investigators will develop a training manual for a family intervention that will be tested via telehealth using the original patient-caregiver pairs.



Veterans benefit from conservative management of prostate cancer

Veterans with low-risk prostate cancer are increasingly choosing to skip immediate surgery in favor of less aggressive treatment, according to results from a [study](#) published in *JAMA*.

Dr. Stacy Loeb at the VA NY Harbor Healthcare System and colleagues conducted a study of more than

In consultation with their doctors, more Veterans with prostate cancer are choosing to skip immediate surgery in favor of watchful waiting, according to a VA study. (Photo @iStock/relif)

125,000 Veterans diagnosed with low-risk prostate cancer. Reviewing claims data, they found that close to 60,000 Veterans were treated with a conservative approach. Nearly 38,000 men in this group received “watchful waiting,” and slightly more than 22,000 received “active surveillance.”

The investigators found that use of conservative management in the VA health system for prostate cancer increased from 27 to 79 percent for Veterans under age 65, over a 10 year period. For men older than 65 years, conservative management increased from 35 to 79 percent over the same period.

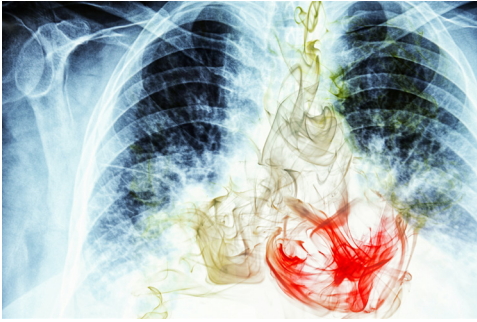
“Our study shows that the VA health care system has done a good job over the last decade in adopting ‘conservative management’ of men diagnosed with early-stage disease,” said Loeb, in a press release by NYU Langone Health. “This marks a historic reversal, at least in the VA, in the decades-long overtreatment of men with prostate cancers least likely to cause harm, and brings their care more in line with the latest best practice guidelines.”

Recent guidelines put forth by the American Urological Association and the American Society of Clinical Oncology recommend a less aggressive approach to treatment for low-risk patients—one that holds off on surgery or radiation therapy.

Low-risk prostate cancer is slow growing and can often be safely observed through “watchful waiting” or more actively followed through “active surveillance”—a process that involves regular check-ups, blood tests, and biopsies.

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The results of this study are in line with conclusions from the VA [PIVOT](#) study, which found that surgery did not result in a significantly lower death rate than observation for treatment of prostate cancer.



Patients who are at low-risk for lung cancer may be able to defer screening, according to VA researchers. (Photo @iStock/gmutlu)

For low-risk patients, screening for lung cancer can be a choice

Patient preferences should be considered when deciding to screen low-risk patients for lung cancer, according to the results of a [study](#) conducted by researchers at the VA Ann Arbor Healthcare System and the University of Michigan.

The researchers' aim was to examine the effect of patient preferences—or the degree of dislike—on the benefits of lung cancer screening. Patient dislikes included negative feelings about going through the screening procedure, screening results, and follow-up care.

Dr. Tanner Caverly and colleagues used data to build a sample of 1 million people aged 55–80 years old who met the U.S. Preventive Services Task Force (USPSFT) criteria for heavy smoking. They then ran simulations to determine the potential outcomes of three years of screening versus no screening for patients with differing levels of risk for developing lung cancer.

The investigators found that overall, the average person with lung cancer risk between 0.3 and 1.3 percent experienced a net benefit from lung cancer screening, even if that person felt negatively about screening. That included close to 53 percent of the study population. For the remaining 47 percent, the researchers concluded that the best approach to screening depended on patient preference.

This approach can allow physicians and patients to have a discussion about the benefits and risks of lung cancer screening, say the researchers. To that end, they developed a web-based [decision tool](#) that patients can use to estimate their risk of lung cancer and help them decide whether screening

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is for them. The investigators also developed a [decision tool](#) intended to help physicians when counseling patients.

In 2013, the USPSTF issued [guidelines](#) that recommended annual screening for lung cancer for individuals aged 55-80 years old who have a history of heavy smoking. The potential downsides of screening for lung cancer are patient inconvenience, false negatives, and false positives that could result in further imaging, invasive procedures, or even death.



Veterans treated in the VA health system receive more conservative treatment for kidney disease without an increase in death rate, than those treated through Medicare. (Photo @iStock/Natali_Mis)

Older Veterans with advanced kidney disease fare better with treatment at VA

Veterans who received medical care for kidney failure through VA were less likely to start dialysis, without an increase in death rate, than those who received care through Medicare, according to a study by VA researchers. The [study](#) results were published in JAMA Internal Medicine.

Investigators at the VA Palo Alto Health Care System in California and colleagues conducted a study of more than 11,000 Veterans aged 67 years or older who had kidney failure. The team analyzed medical data collected from VA, Medicare, and the U.S. Renal Data System. Their goal was to find out if there was a difference between receiving care through VA or Medicare prior to initiating dialysis.

Veterans treated for kidney disease in the VA typically start dialysis later than those who are treated through Medicare, said the researchers. Nearly 82 percent of patients in the study who received pre-dialysis care through Medicare started dialysis within two years. In the VA group, only 53 percent of Veterans started dialysis within two years.

Despite receiving dialysis less often, the study found that Veterans treated through VA were less likely to die than those who received care through

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Noteworthy Publications

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Medicare. Of the 7,000 Veterans who started dialysis, 47 percent died within two years. In the Medicare group 54 percent of Veterans died within two years of starting dialysis. In the VA group 43 percent—nearly 20 percent fewer patients—died within two years of starting dialysis.

When researchers adjusted the analysis for variables like gender, race, and driving distance from a VA hospital, the results were consistent—Veterans treated through VA were less likely to die after initiating dialysis.

VA's integrated health care system, write the study authors, appears to support less-intensive treatment for kidney failure, without increasing mortality. They also note that physicians employed by VA do not have a financial incentive to start dialysis, in contrast to non-VA physicians who receive higher reimbursement for seeing dialysis patients.

Want to hear about the latest in VA research, *direct* from the experts?
Listen to the **Voices of VA Research** podcast series:
www.research.va.gov/podcasts





Dr. Leonie Heyworth

Sharing connections in times of distress

Dr. Leonie Heyworth is an internist and health services researcher with the VA San Diego Healthcare System in La Jolla, California. She is also VA's national synchronous telehealth lead for the Office of Connected Care. In an [editorial](#) published in *JAMA*, she recounts her experience treating a Vietnam Veteran in Texas—via telehealth—who had nearly been stranded in the flood waters of Hurricane Harvey. The storm, a Category 4 hurricane, hit the Houston area in 2017—causing more than \$100 billion in damage from catastrophic flooding.

As VA launched its emergency response system to help Veterans impacted by Hurricane Harvey, it also included for the first time a telehealth component. Virtual capabilities were established at two mega-shelters and four community-based outpatient clinics. In addition to medical services, more than 100 social workers volunteered their services to Veterans and community members who were in need of counseling.

Despite concerns about the isolating effects of technology, writes Heyworth, it is important to acknowledge how well-suited it is in connecting patients who don't have access to health care with remote providers. In the case of Heyworth's patient, she was able to prescribe an antibiotic to treat a diabetic ulcer on his foot, which had been contaminated by dirty flood waters. During a follow-up telephone call, he told Heyworth that he felt much better and was able to bring his wife to her chemotherapy appointment.

“In health care, telehealth offers the vital opportunity to directly connect caregivers to those most in need of care and those most lacking access to that care,” writes Heyworth. “In the case of natural disasters, telehealth has the unique capacity to scale operations and offer quick access to primary care, mental health, or specialty services.”

* *To find out more about VA's use of telehealth in emergency responses to natural disasters, [read](#) “Telehealth proves its worth, saving life and limb in the aftermath of hurricane” [and](#) “VHA's telehealth emergency medicine use holiday to test systems, prepare for emergency responses.”*



Dr. Courtney Van Houtven

'Bringing invisible partners in care out of the shadows'

As vital as family caregivers are to disabled Americans, there are limited resources to help these caregivers financially, says Dr. Courtney Van Houtven. And, if they do receive financial support, she adds, there will likely be unintended consequences that should be considered. Van Houtven is a VA researcher with the HSR&D Center for Health Services Research in Primary Care, in Durham, North Carolina. In an online [editorial](#) published ahead of print in *Health Services Research*, Van Houtven writes about the lack of strong evidence-based research on the effects of removing family caregivers from the workforce by supplying financial support.

In Europe, she writes, there are multiple systems in place to support family caregiving. But in the U.S. there isn't a single support system that all caregivers can utilize. Resources are fragmented. So far, only three states in the U.S. have implemented paid family medical leave: California, New Jersey, and Rhode Island. New York will offer similar benefits starting in 2018. In these states, family medical leave is funded through employee-paid payroll taxes.

In the case of U.S. Veterans, there is a national support program for caregivers of Veterans that offers training and respite care. For caregivers of post 9/11 Veterans who have significant limitations and need help with activities of daily living, there are more robust benefits such as a stipend and health insurance.

However, if family or friends elect to step out of the workforce in order to be a full-time caregiver, says Van Houtven, they may face future economic insecurity by losing or reducing their Social Security and Medicare benefits.

**Listen to Dr. Houtven [talk](#) about her research evaluating the VA CARES caregiver support program.*



Dr. Stefan Kertesz

‘Suggested paths to fixing the opioid crisis’

In an [editorial](#) published in *JAMA Network*, Birmingham, Alabama, VA researcher Dr. Stefan Kertesz and his coauthor Dr. Jeffrey Samet suggest there are no easy answers to addressing the national opioid crisis. While it is prudent to follow the current path of opioid prescription controls that look at limiting the dose and duration of prescriptions, that alone will not address the full problem, they say. They recommend taking a broader view, one that recognizes the importance of addiction care that is integrated into the primary care setting.

The authors point to the disturbing findings from a [study](#) led by Dr. Tara Gomes, also published in *JAMA Network*. The researchers found that the percentage of deaths attributable to opioids in the U.S. increased by nearly 300 percent during the period 2001–2016. Young people were hit the hardest—in 2016, 20 percent of all deaths among adults age 24 to 35 years involved opioids.

The scope of the opioid problem requires a different treatment approach, say the authors. They believe that addiction care should become part of “mainstream medicine.” To start, physicians and other care providers should be trained in the use of medications like methadone and buprenorphine to help patients stop taking opioids. At present, methadone can be prescribed only in a licensed clinic. The authors also recommend the use of complementary services like psychotherapy and housing assistance to help patients successfully stop opioid use.

“Medical efforts to address substance use disorders, and in particular opioid use disorders, should grow within primary care and be allied with the addiction subspecialty care system,” write the authors. “Accessible, effective medical care that routinely includes medications should be the standard to which clinical practice is held.”



Dr. Laura A. Petersen, Director, Center for Innovations in Quality, Effectiveness and Safety

Dr. Laura A. Petersen receives prestigious Under Secretary's Award

Dr. Laura A. Petersen, director of the VA Center for Innovations in Quality, Effectiveness and Safety ([iQuEST](#)) in Houston, has been awarded the 2017 Under Secretary's Award for Outstanding Achievement in Health Services Research. The award, which is considered to be one of the highest honors within the VA research community, recognizes outstanding leadership and research efforts in the field of health services.

Petersen, associate chief of staff for research at the Michael E. DeBakey VA Medical Center in Houston, is known for her contributions to the field of quality improvement in patient care. She has been instrumental in research that has led to better patient outcomes within the VA health care system. Past quality initiatives spearheaded by Petersen include assessing the effects of limiting medical residency work hours, comparing patient care within VA to Medicare fee-for-service care, and investigating the effects of pay-for-performance programs on minority patients.

Throughout her career, Petersen has received 48 research funding awards from agencies that include the National Institutes of Health, the American Heart Association, and the Robert Wood Johnson Foundation.

She is also a prolific author, having published over 150 articles in premier scientific and medical journals like the *New England Journal of Medicine* and *JAMA*. One recent [study](#) she led compared the effectiveness of nurse practitioners and physician assistants in managing diabetes and cardiovascular disease in Veterans. The study examined more than 200,000 Veterans at 130 VA health care facilities, and found no difference between care given by NPs or PAs. VA has been a leader in giving advanced practice NPs [full-practice authority](#) to act as primary caregivers to help alleviate the physician shortage.

As director of the iQuEST center of innovation, Petersen is committed to mentoring future research scientists—emphasizing diversity in race and

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gender. The center's faculty is currently made up of nearly 70 percent women and minorities. Petersen herself mentors five iQuEST faculty members, and numerous medical students and fellows.

iQuEST is a collaboration between VA and Baylor College of Medicine, where Petersen is a professor of health services research. In an overview message on the iQuEST website, Petersen says, “[The center] conducts high-quality scientific research that improves the health of Veterans and patients across the nation, by helping to ensure the patient-centered delivery of scientific discoveries.”



Woman testing her blood sugar level using a glucose meter. (Photo for illustrative purposes only. ©iStock/Mark Hatfield)

VA Pittsburgh, Hudson Valley research team named runner-up for 2018 ECRI award

A team of VA researchers were recognized as finalists in the [ECRI Institute's](#) 12th annual Health Devices Achievement Award. Researchers from the VA Pittsburgh Healthcare System, the VA National Center for Patient Safety, and the VA Hudson Valley Health Care System were commended for their work to eliminate treatment errors stemming from the use of a particular brand of blood glucose monitor.

The team members initiated a [study](#) in response to FDA reports that health care providers—including many from VA health care facilities—were misinterpreting blood glucose readings coming from a particular blood glucose monitor. The monitor in question could be configured to display critical blood glucose readings in multiple ways. The researchers surmised that certain configurations were more likely to be misinterpreted by providers.

The researchers developed a project that included three phases to test the six display configurations available on monitor. They were an evaluation to assess ease of use, two pilot tests to evaluate materials and procedures, and a simulation study comparing two screen configurations—a numerical display and a text display. The device displays were assessed on the ability to avoid obscure error codes and limit abbreviations to those that are universally recognized, among other criteria.

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During the simulation study, participants were asked to interpret the text and numerical displays and choose the appropriate treatment. The researchers found that a text display that said “out of critical range” in response to a dangerously low blood sugar reading was misinterpreted by 11 percent of study participants, who then recommended the wrong treatment. When presented with the numerical display, none of the participants made a treatment error.

Fifteen percent of study participants (66 nurses at two VA medical centers) said they were confused by the “out of critical range” text display. Researchers said this could potentially be interpreted by the provider as a “not critical” reading.

The investigators concluded that using a blood glucose monitor that used a numerical display, rather than a potentially confusing text display, could eliminate life-threatening errors. The team developed configuration recommendations for the monitor and communicated its concerns to the manufacturer. A firmware update has already been released by the manufacturer to address some of the issues that the VA team has identified.

Patients who have diabetes require frequent testing of blood glucose levels using a lancet to draw blood from a finger and a blood glucose monitor to measure blood sugar levels. Based on the device’s measurements, providers make decisions on the amount of insulin or other medications to prescribe.

Project team members from VA Pittsburgh included Jamie Estock, Holly Curing, Audrey Gallagher, and Monique Y. Boudreaux-Kelly; from VA Hudson Valley they included Jeanette Acevedo and Marylyn Brammer; and from the National Center for Patient Safety they included Katrina Jacobs and Tandi Bagian.

The ECRI Institute is a nonprofit organization that is dedicated to testing medical devices, products, drugs, and procedures to improve patient care in the United States. Each year, the institute presents a Health Devices Achievement Award to a member organization that demonstrates innovation and improvement to patient safety through health technology.



Dr. John Blosnich

Dr. John Blosnich receives VA I Care award for LGBT research

The Lesbian, Gay, Bisexual, and Transgender Health Program in the VA Office of Patient Care Services has awarded an I CARE certificate of excellence to Dr. John Blosnich, a VA health services researcher. The award recognizes his outstanding work in support of excellence in health care and ancillary services for LGBT Veterans.

“The goal of the I CARE Award for [LGBT Veteran Services](#) is to publicly acknowledge the innovative programs, outstanding clinical services, and community outreach which improves access to and quality of services for LGBT Veterans,” said Dr. Alexis Matza, program coordinator for LGBT Veterans Services.

Blosnich is a health services researcher at the Center for Health Equity Research and Promotion ([CHERP](#)) at the VA Pittsburgh Healthcare System. He is also an assistant professor at the University of Pittsburgh. His research focuses on issues that affect LGBT Veterans, such as interpersonal and self-directed violence and suicide prevention. He is the recipient of a five-year Health Services Research and Development Career Development Award—the first of its kind to examine transgender health issues within the VA health system.

One recent example of Blosnich’s work is a [study](#) published in May 2018 in the *American Journal of Preventive Medicine*. Blosnich and colleagues examined the relationship between spirituality and suicidal ideation and attempts in people who were part of a sexual minority group. Researchers used data from the 2011 University of Texas at Austin’s Research Consortium, which surveyed over 21,000 college-enrolled young adults who reported their sexual identity as heterosexual, gay/lesbian, bisexual, or questioning. The study found that the more important religion was to gay/lesbian, bisexual, or questioning students, the higher the odds that they had experienced thoughts of suicide. The researchers concluded that religion-based services for mental health and suicide prevention might not benefit this group of people. They advised religious-based providers to stress their commitment to welcoming sexual minority individuals.

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VA has established five values that help define its mission to “care for those who have borne the battle.” They are Integrity, Commitment, Advocacy, Respect, and Excellence. In sum, they are referred to as I CARE. To recognize VA employees who exemplify I CARE, VA established the I CARE Honor Award. Recipients are nominated by their peers—other employees in the VA system.

* *To find out more about Dr. Blosnich’s work, read [“Promoting health equity among LGBT Veterans.”](#)*

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